

Application No.: 10/576,422
Amendment under 37 CFR 1.111
Reply to Office Action dated February 3, 2010
May 3, 2010

REMARKS

By this amendment, claims 1, 11-12 and 14 have been amended in the application. Currently, claims 1, 11-12 and 14 are pending in the application.

Claim 1 was objected to because of the following informality: the Examiner suggested that "conducted at the time" should be read "conducted at a time". By this amendment, claim 1 has been amended to recite "update information in said update notification part is updated only immediately before data of said recording area is first updated after initialization processing of said recording medium conducted at a time when the recording medium is inserted into the data processing apparatus" as the Examiner suggested. It is respectfully submitted that the objection has been overcome by the amendments to claim 1, and should be withdrawn

Claims 1, 11 and 12 were rejected under 35 USC 103(a) as being obvious over Komori et al. (U.S. Patent No. 6,046,937) in view of Yoshino et al. (U.S. Patent Application Publication No. 2002-0083282) and Shibasaki et al. (U.S. Patent Application Publication No. 2001/0014933. Also, claim 14 was rejected under 35 USC 103(a) as being obvious over Komori et al. in view of Shibasaki et al. and further in view of Yoshino et al.

Application No.: 10/576,422
Amendment under 37 CFR 1.111
Reply to Office Action dated February 3, 2010
May 3, 2010

These rejections are respectfully traversed in view of the amendments to the claims and the remarks below.

The present invention relates to a readable and writable recording medium, and a data processing apparatus and data processing method for processing data stored in the recording medium (see page 1, lines 8-11 of the specification).

In Fig. 1, a recording medium 100 includes a host interface part 110, a controller 120, a nonvolatile recording area 130, an update notification part 140 and a medium ID holder 150 (see page 8, paragraph [0012] of the specification).

When data in any part of the nonvolatile recording area 130 can be written or erased, the update information is updated by the controller 120 and update notification part 140 holds the value. The update information may be held in a part of the nonvolatile recording area 130 (see page 9, paragraph [0014]).

By this amendment, independent claim 1 has been amended to recite "an update notification part for updating update information of the time of writing or erasing of data to said nonvolatile recording area and holding said update information in said nonvolatile recording area". Also, independent claim 1 has been amended to recite "update information in said update notification part is updated only immediately before data of said nonvolatile recording area is first updated after initialization

Application No.: 10/576,422
Amendment under 37 CFR 1.111
Reply to Office Action dated February 3, 2010
May 3, 2010

processing of said recording medium conducted at a time when the recording medium is inserted into the data processing apparatus".

Also, independent claim 14 has been amended to recite the steps of "making possible for update information in said update notification part in said nonvolatile recording area to be read from said data processing apparatus and impossible for update information to be written by said data processing apparatus; updating said update information by said controller at the time of writing or erasing of data to said nonvolatile recording area; and determining whether or not data of said nonvolatile recording area in said recording medium has been updated after said data was recorded by determining whether or not update information of a field in the recording area read from said recording medium corresponds to update information in said update notification part read from said recording medium".

These claimed features are not shown or suggested by Komori et al., Yoshino et al., Shibasaki et al. or any combination of these references.

Komori et al. relates to an electronic control unit, which executes on-board rewriting of control programs and control data used for regulating operations of predetermined mechanisms or objects to be controlled (see col. 1, lines 14-17).

Application No.: 10/576,422
Amendment under 37 CFR 1.111
Reply to Office Action dated February 3, 2010
May 3, 2010

Komori et al. disclose that in Fig. 1, an electronic control unit (ECU) 2 is mounted on a vehicle (automobile) for controlling an internal combustion engine. The ECU 2 comprises sensors 4, an input processing circuit (IPC) 6, a microcomputer 8, driving actuators (ACT) 10, an output circuit (OC) 12, an ignition switch 17 and a power supply circuit 18 (see col. 4, lines 16-34).

Komori et al. also disclose that the microcomputer 8 comprises a known central processing unit (CPU) 20, a nonvolatile flash memory 22, a masked ROM 24 for storing programs (more particularly, data constituting programs), a volatile RAM 26 and an input/output (I/O) circuit 28 (see col. 4, lines 41-48).

Komori et al. also disclose that the flash memory 22 is a nonvolatile read-only memory capable of electrically erasing and rewriting contents therein (electrically rewritable ROM) (see col. 4, lines 53-54).

Komori et al. do not disclose that update information in the update notification part is updated only immediately before data of the nonvolatile recording area is first updated after initialization processing of the recording medium conducted at a time when the recording medium is inserted into the data processing apparatus as claimed in independent claim 1.

Komori et al. also do not disclose the step of determining whether or not data of the nonvolatile recording area in the

Application No.: 10/576,422
Amendment under 37 CFR 1.111
Reply to Office Action dated February 3, 2010
May 3, 2010

recording medium has been updated after the data was recorded by determining whether or not update information of a field in the recording area read from the recording medium corresponds to update information in the update notification part read from the recording medium as claimed in independent claim 14.

For these reasons, it is believed that Komori et al. do not show or suggest the presently claimed features of the present invention. Applicants also submit that Yoshino et al. do not make up for the deficiencies in Komori et al.

Yoshino et al. relate to data processing devices and data processing methods, and program providing media used therewith (see page 1, paragraph [0002]).

Yoshino et al. disclose that a media 1 includes a control unit 211 that controls the input and output of data, and a memory unit 212 that stores the content. The memory unit 212 not only stores the content together with corresponding header information, but also stores a media identifier (ID) as identification information unique to each media, and a block permission table (BPT) as an access permission table describing memory-access control information (see page 5, paragraph [0095]).

Yoshino et al. also disclose that Fig. 3 show the structure of data stored in each of the memory units 211 and 233 of media 1 (210) and media 2 (230). Each memory unit is, for example, a

Application No.: 10/576,422
Amendment under 37 CFR 1.111
Reply to Office Action dated February 3, 2010
May 3, 2010

flash memory that is a form of electrically erasable, programmable read-only memory (EEPROM) (see page 6, paragraph [0098]).

Yoshino et al. do not disclose that update information in the update notification part is updated only immediately before data of the nonvolatile recording area is first updated after initialization processing of the recording medium conducted at a time when the recording medium is inserted into the data processing apparatus as claimed in independent claim 1.

Yoshino et al. also do not disclose the step of determining whether or not data of the nonvolatile recording area in the recording medium has been updated after the data was recorded by determining whether or not update information of a field in the recording area read from the recording medium corresponds to update information in the update notification part read from the recording medium as claimed in independent claim 14.

For these reasons, it is believed that Yoshino et al. do not show or suggest the presently claimed features of the present invention. Applicants also submit that Shibazaki et al. do not make up for the deficiencies in Komori et al. and Yoshino et al.

Shibazaki et al. relate to a method of producing a memory management table that has control over memories having a function to hold data at a time of power cut-off and manages identifier

Application No.: 10/576,422
Amendment under 37 CFR 1.111
Reply to Office Action dated February 3, 2010
May 3, 2010

information of memory areas to be data storage destinations designated by a logical address issued by a host device, and to a memory device for which the method is employed (see page 1, paragraph [0001]).

Shibazaki et al. disclose that a memory device 1 comprises one or a plurality of memories 10, a CPU 11, a controller 12 and a bus 13 (see page 2, paragraph [0047]).

Shibazaki et al. also discloses that a memory management table 14 is developed by the CPU 11 and manages the identifier information in a memory region that is the data storage destination designated by a logical address issued by the host device 2 (see page 2, paragraph [0048]).

Shibazaki et al. do not disclose that an update notification part for updating update information of the time of writing or erasing of data to the nonvolatile recording area and holding the update information in the nonvolatile recording area as claimed in independent claim 1.

Also, Shibazaki et al. do not disclose that update information in the update notification part is updated only immediately before data of the nonvolatile recording area is first updated after initialization processing of the recording medium conducted at a time when the recording medium is inserted

Application No.: 10/576,422
Amendment under 37 CFR 1.111
Reply to Office Action dated February 3, 2010
May 3, 2010

into the data processing apparatus as claimed in independent claim 1.

Also, Shibazaki et al. do not disclose the steps of making possible for update information in the update notification part in the nonvolatile recording area to be read from the data processing apparatus and impossible for update information to be written by the data processing apparatus; updating the update information by the controller at the time of writing or erasing of data to the nonvolatile recording area; and determining whether or not data of the nonvolatile recording area in the recording medium has been updated after the data was recorded by determining whether or not update information of a field in the recording area read from the recording medium corresponds to update information in the update notification part read from the recording medium as claimed in independent claim 14.

Specifically, Shibazaki et al. disclose a method of producing a memory management table. The memory management table contributes to easy access from a host device. The table controls memories having a function to hold data at a time of power cut-off, and manages which data area holds data. The memory device of Shibazaki et al. produces the memory management table soon after the device is inserted in a personal computer.

Application No.: 10/576,422
Amendment under 37 CFR 1.111
Reply to Office Action dated February 3, 2010
May 3, 2010

On the other hand, the update information of the present invention records the state of changing the nonvolatile recording area of the recording medium. Even if the data stored in the recording medium is read by the access device, the update information is not updated, since there is no need to update based on the object of the present invention as described paragraphs [0003] and [0006] of the specification.

Further in Shibazaki et al., the memory management table 14 is a storing region within the CPU 11, and this means the table is a volatile memory or register and not a nonvolatile memory. Further, the count information storage region in Yoshino et al. is a part of a nonvolatile memory and the flash memory in Komori et al. is also a nonvolatile memory. Therefore, applicants respectfully submit that it would not have been obvious to combine the volatile memory of Shibazaki et al. with the nonvolatile memories discussed in Komori et al. and Yoshino et al.

It is therefore respectfully submitted that Komori et al., Yoshino et al. and Shibazaki et al., individually or in any combination, do not teach, disclose or suggest the presently claimed invention and it would not have been obvious to one of ordinary skill in the art to combine these references to render

Application No.: 10/576,422
Amendment under 37 CFR 1.111
Reply to Office Action dated February 3, 2010
May 3, 2010


the present claims obvious. None of these references show or suggest the update information aspects of the claimed invention.

In view of foregoing claim amendments and remarks, it is respectfully submitted that the application is now in condition for allowance and an action to this effect is respectfully requested.

If there are any questions or concerns regarding the amendments or these remarks, the Examiner is requested to telephone the undersigned at the telephone number listed below.

Respectfully submitted,

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